Advanced Hypersonic Weapon Flight Test Overview to the Space & Missile Defense Conference

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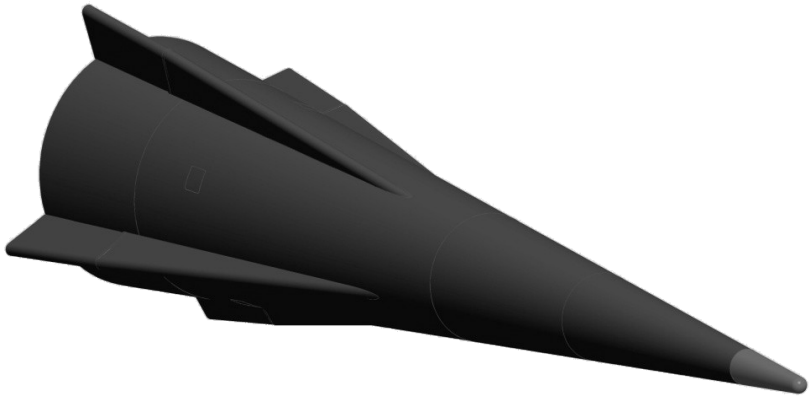
Advanced Hypersonic Weapon (AHW)

- Technology Demonstration Program
- Addresses the conventional strike gap
- Discernible non-ballistic trajectory
- Conventional payload delivery capability within Conventional Prompt Global Strike (CPGS) timeline requirements
- Funded by the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics/Strategic Warfare (OUSD AT&L)



AHW Team

Organization	Role
Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics/Strategic Warfare (OUSD AT&L/Strategic Warfare)	Program Sponsor & Funding
U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT)	AHW Program Office (Management & Execution)
Sandia National Laboratories (FFRDC)	Glide Body & Booster System
U.S. Army Aviation and Missile Research Development and Engineering Center (AMRDEC)	Thermal Protection System (TPS)
	s & Logistics
Division	

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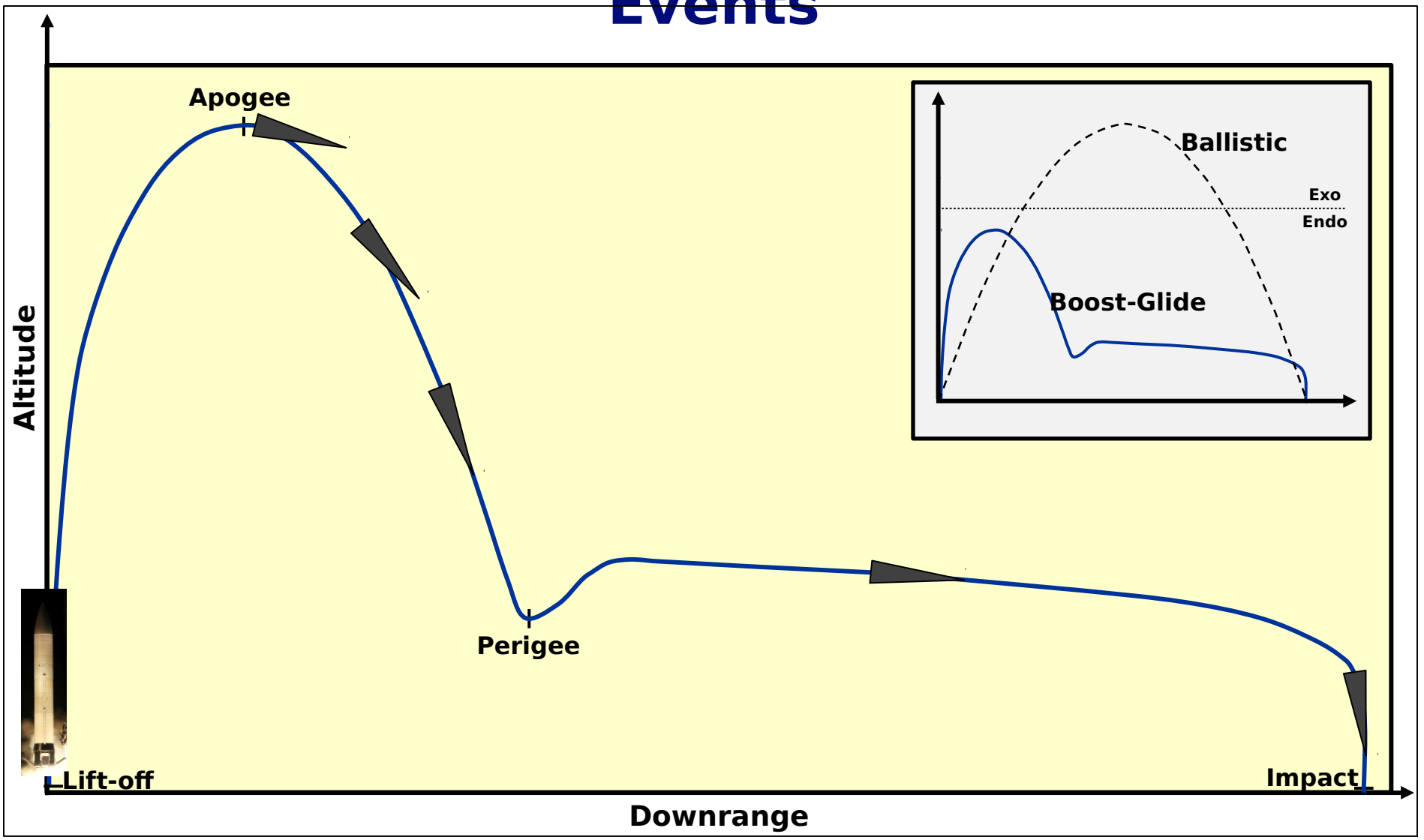
AHW FT-1A Launch Vehicle

AHW Flight Test 1A (FT-1A) Mission Events



AHW FT-1A Overview

Primary Objective

- Collect data on hypersonic boost-glide technologies and test range performance for long-range atmospheric flight.

Date: 17 November 2011

Launch Location: Kauai Test Facility, Hawaii

Impact: Reagan Test Site

Launch Vehicle: Three-stage booster system

Payload: Instrumentation package

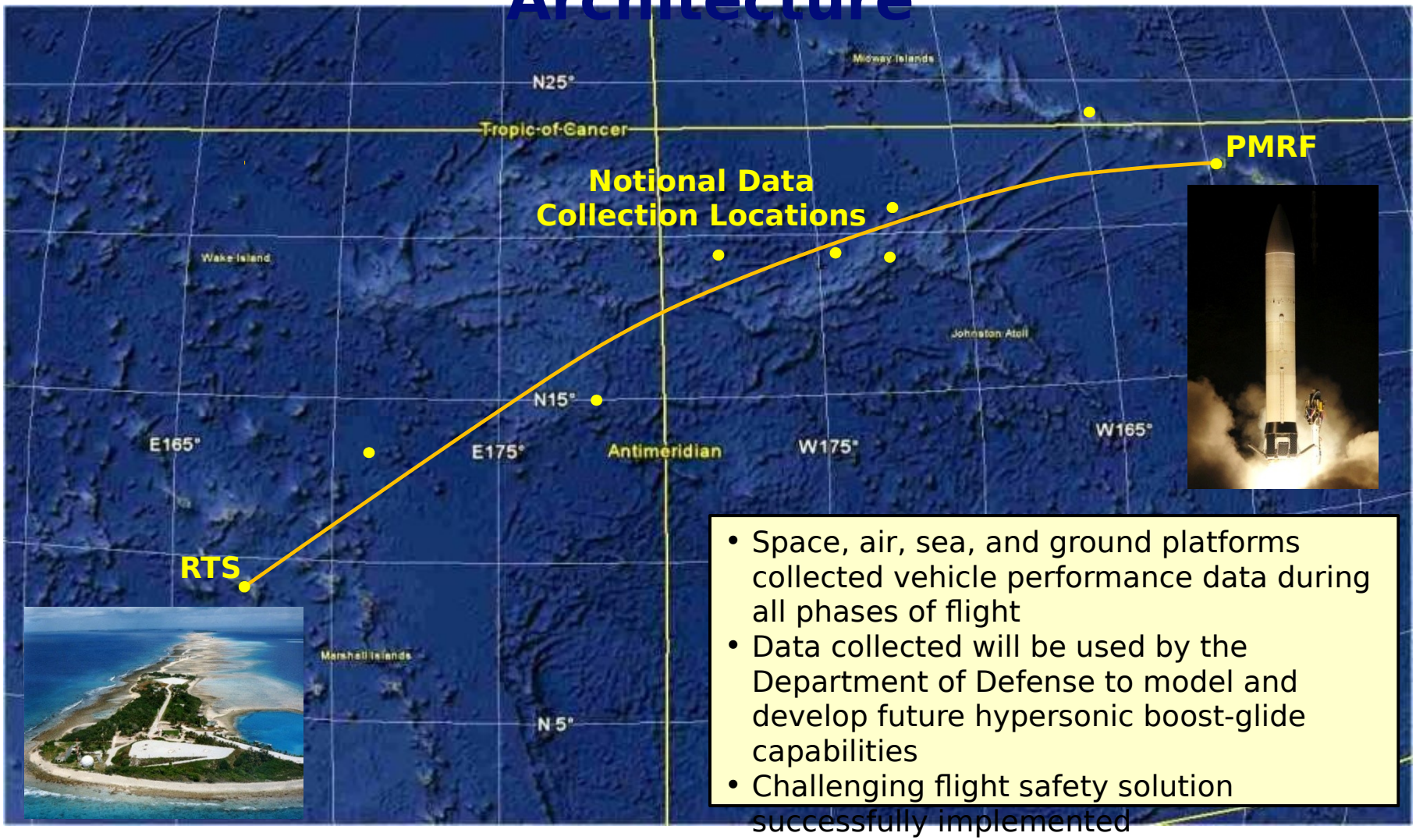
Mission Emphasis: Aerodynamics; Navigation, Guidance, and Control; and Thermal Protection System Technologies

Kauai Test Facility

Launch Vehicle

Reagan Test Site

AHW FT-1A Data Collection Architecture



- Space, air, sea, and ground platforms collected vehicle performance data during all phases of flight
- Data collected will be used by the Department of Defense to model and develop future hypersonic boost-glide capabilities
- Challenging flight safety solution successfully implemented

AHW Technologies Demonstrated

- First demonstration of boost glide hypersonic system at CPGS relevant range
- First successful use of an advanced thermal protection system for intermediate range hypersonic flight
- Integrated thermal management demonstrated
- First use of leading edge NG&C methods employed in a hypersonic vehicle

Significant Demonstration of Technologies Applicable to the Entire Spectrum of CPGS

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Summary

- FT-1A successfully met all flight test objectives
- Demonstrated key technologies applicable to CPGS
- Collected over 800 Gb of data
- Data will validate and anchor models and simulations

FT-1A Successfully Met All Flight Test Objectives

Path Forward

- Significant challenges still remain
- Flight Test 2 (FT-2) will further demonstrate key technologies for CPGS
- FT-2 planned for late FY14

AHW Team Ready for the Next Challenge